ATTACHMENT A

Clean Replacement/New Claims (entire set of pending claims)

Following herewith is a clean copy of the entire set of pending claims.

1. Apparatus for physiological monitoring of a remote subject including:

a base station having a transmission means for transmitting a reference signal; and

at least one physiological monitoring probe connectable to said subject, said physiological monitoring probe or probes having:

receiver means for receiving said reference signal;

monitoring means for monitoring said subject and generating a condition signal containing information related to a condition or conditions of said subject;

modulation means for modulating said reference signal to produce a modulated reference signal containing said information contained in said condition signal; and

passive retransmission means for passively retransmitting said modulated reference signal to said base station;

wherein said base station has means for receiving said modulated reference signal, and means for demodulating said modulated reference signal to obtain said information related to one or more conditions of said subject so that one or more conditions of said subject can be monitored at said base station, and wherein said physiological monitoring means includes intermediate signal mean for generating an intermediate signal. Derived by combining said condition signal with a fixed or varying frequency signal before modulating said reference signal.

2. Apparatus as claimed in claim 1, wherein said receiving means and passive retransmission means are a passive radio transponder.

3. (amended) Apparatus as claimed in claim I, wherein said monitoring means includes a physical parameter transducer.

4. (amended) Apparatus as claimed in claim I, wherein said monitoring means includes a biological electrode.

5. (amended) Apparatus an claimed in claim 1, wherein said intermediate signal means is operable to convert analog and/or digital signals from the monitoring means to an intermediate signal which is used to modulate a radio frequency signal received by a passive radio transponder, so that. the transponder automatically retransmits a modulated signal which contains information relating to the condition of the subject.

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6. (amended) Apparatus as claimed in claim 1, wherein said passive radio transponder may use a plurality of intermediate signals to modulate a radio frequency reference signal.

7. (amended) Apparatus as claimed in claim 1, wherein said base station includes analog and/or digital outputs for outputting data.

8. (amended) Apparatus as claimed in claim 1, wherein said base station is connectable to a computer network, and operable to receive input and output data-via said computer network.

9. (amended) Apparatus as claimed in claim 1, including encryption means so that said apparatus can transmit and/or receive data in encrypted form.

10. (amended) Apparatus as claimed in claim 1, wherein said condition signal includes a synchronous or an asynchronous data signal.

11. (amended) Apparatus as claimed in claim 1, wherein said base station is operable to use either a fixed frequency reference signal or vary the frequency or phase of the reference signal by a continuously varying signal having an instantaneous value that determines the respective instantaneous frequency or phase.

12. Apparatus as claimed in claim 11 in which the continuously varying signal is a Pseudo-Random Binary Sequence.

13. A method of physiological monitoring of remote subject including:

transmitting a reference signal from a base station to at least one remote physiological monitoring probe connected to a subject;

monitoring said subject and generating a condition signal containing information related to a condition or conditions of a said subject;

generating an intermediate signal derived by combining said condition signal with a fixed or varying frequency signal;

modulating said reference signal to produce a modulated reference signal containing said information contained in said condition signal;

passively retransmitting said modulated reference signal from said biological monitoring probe to said base station; and

demodulating said modulated reference signal to obtain said information related to the condition or conditions of said subject so that the condition or conditions of said subject can be monitored at said base station.

14. A method as claimed in claim 13, wherein said fixed or varying frequency signal includes a plurality of sub-carrier signals.

15. (amended) A method as claimed in claim 13 further including converting analog and/or digital signals from a subject monitoring means to the intermediate signal which is then used to modulate a radio frequency signal received by a passive radio transponder, whereby the transponder automatically retransmits a modulated signal containing information relating to the condition of the subject.

16. (amended) A method as claimed in claim 13, including transmitting data from said base station over a computer network, and/or inputting data over a computer network.

17. (amended) A method as claimed in claim 13, including encrypting data to be output by said base station, and/or encrypting said modulated reference signal.

18. (amended) A method as claimed in claim 13, including transmitting said condition signal as a synchronous or an asynchronous data signal.

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19. (amended) A method as claimed in claim 13, including fixing the frequency of the reference signal or varying the frequency or phase of the reference signal by a continuously varying signal having an instantaneous value that determines the respective instantaneous frequency or phase.

20. A method as claimed in claim 19 in which the continuously varying signal is a Pseudo-Random Binary Sequence.

21. (amended) A method as claimed in claim 13, wherein said method is used to monitor sleep apnoea.

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ATTACHMENT B

Marked Up Replacement Claims

Following herewith is a marked up copy of each rewritten claim together with all other pending claims.

1. Apparatus for physiological monitoring of a remote subject including:

a base station having a transmission means for transmitting a reference signal; and

at least one physiological monitoring probe connectable to said subject, said physiological monitoring probe or probes having:

receiver means for receiving said reference signal;

monitoring means for monitoring said subject and generating a condition signal containing information related to a condition or conditions of said subject;

modulation means for modulating said reference signal to produce a modulated reference signal containing said information contained in said condition signal; and

passive retransmission means for passively retransmitting said modulated reference signal to said base station;

wherein said base station has means for receiving said modulated reference signal, and means for demodulating said modulated reference signal to obtain said information related to one or more conditions of said subject so that one or more conditions of said subject can be monitored at said base station, and wherein said physiological monitoring means includes intermediate signal mean for generating an intermediate signal. Derived by combining said condition signal with a fixed or varying frequency signal before modulating said reference signal.

2. Apparatus as claimed in claim 1, wherein said receiving means and passive retransmission means are a passive radio transponder.

3. (amended) Apparatus as claimed in ~~either~~ claim 1 ~~or 2~~, wherein said monitoring means includes a physical parameter transducer.

4. (amended) Apparatus as claimed in ~~either~~ claim 1 ~~or 2~~, wherein said monitoring means includes a biological electrode.

5. (amended) Apparatus an claimed in ~~any one of claims 1 to 4~~claim 1, wherein said intermediate signal means is operable to convert analog and/or digital signals from the monitoring means to an intermediate signal which is used to modulate a radio frequency signal received by a passive radio transponder, so that. the transponder automatically retransmits a modulated signal which contains information relating to the condition of the subject.

6. (amended) Apparatus as claimed in ~~any one of claims 1 to 6~~claim 1, wherein said passive radio transponder may use a plurality of intermediate signals to modulate a radio frequency reference signal.

7. (amended) Apparatus as claimed in ~~any one of the preceding claims~~claim 1, wherein said base station includes analog and/or digital outputs for outputting data.

8. (amended) Apparatus as claimed in ~~any one of the preceding claims~~claim 1, wherein said base station is connectable to a computer network, and operable to receive input and output data-via said computer network.

9. (amended) Apparatus as claimed in ~~any one of the preceding claims~~claim 1, including encryption means so that said apparatus can transmit and/or receive data in encrypted form.

10. (amended) Apparatus as claimed in ~~any one of the preceding claims~~claim 1, wherein said condition signal includes a synchronous or an asynchronous data signal.

11. (amended) Apparatus as claimed in ~~any one of the preceding claims~~claim 1, wherein said base station is operable to use either a fixed frequency reference signal or vary the frequency or phase of the reference signal by a continuously varying signal

having an instantaneous value that determines the respective instantaneous frequency or phase.

12. Apparatus as claimed in claim 11 in which the continuously varying signal is a Pseudo-Random Binary Sequence.

13. A method of physiological monitoring of remote subject including:

transmitting a reference signal from a base station to at least one remote physiological monitoring probe connected to a subject;

monitoring said subject and generating a condition signal containing information related to a condition or conditions of a said subject;

generating an intermediate signal derived by combining said condition signal with a fixed or varying frequency signal;

modulating said reference signal to produce a modulated reference signal containing said information contained in said condition signal;

passively retransmitting said modulated reference signal from said biological monitoring probe to said base station; and

demodulating said modulated reference signal to obtain said information related to the condition or conditions of said subject so that the condition or conditions of said subject can be monitored at said base station.

14. A method as claimed in claim 13, wherein said fixed or varying frequency signal includes a plurality of sub-carrier signals.

15. (amended) A method as claimed in claim 13 ~~or 14~~ further including converting analog and/or digital signals from a subject monitoring means to the intermediate signal which is then used to modulate a radio frequency signal received by a passive radio transponder, whereby the transponder automatically retransmits a modulated signal containing information relating to the condition of the subject.

16. (amended) A method as claimed in ~~any one of claims 13 to 15~~claim 13, including transmitting data from said base station over a computer network, and/or inputting data over a computer network.

17. (amended) A method as claimed in ~~any one of claims 13 to 16~~claim 13, including encrypting data to be output by said base station, and/or encrypting said modulated reference signal.

18. (amended) A method as claimed in ~~any one of claims 13 to 17~~claim 13, including transmitting said condition signal as a synchronous or an asynchronous data signal.

19. (amended) A method as claimed in ~~any one of claims 13 to 18~~claim 13, including fixing the frequency of the reference signal or varying the frequency or phase of the reference signal by a continuously varying signal having an instantaneous value that determines the respective instantaneous frequency or phase.

20. A method as claimed in claim 19 in which the continuously varying signal is a Pseudo-Random Binary Sequence.

21. (amended) A method as claimed in ~~any one of claims 13 to 20~~claim 13, wherein said method is used to monitor sleep apnoea.